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RESULTS OF THE FIRST SAVE STUDY

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Working Paper 9902  
<http://www.nber.org/papers/w9902>

NATIONAL BUREAU OF ECONOMIC RESEARCH  
1050 Massachusetts Avenue  
Cambridge, MA 02138  
August 2003

We are grateful to Anette Reil-Held, Bernd Katzenstein, Klaus Kortmann and Joachim Winter for most helpful comments and to the interviewers for their commitment in implementing this study. We would also like to thank the German Science Foundation (DFG) and the European Commission, who financed most of the survey through the "Sonderforschungsbereich 504" and the TMR Grant "Savings, Pensions and Portfolio Choice". Finally, we thank Volker Zimmermann for translating parts of this paper from German to English. The usual disclaimers apply. The views expressed herein are those of the authors and not necessarily those of the National Bureau of Economic Research.

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NBER Working Paper No. 9902  
August 2003  
JEL No. D1

### **ABSTRACT**

Germany is an interesting country to study saving among older households since nearly everyone - whether in the middle income bracket or richer - saves substantial amounts in old age. Only households in the lowest quarter of the income distribution spend more between the ages of 60 and 75 than they save. Our paper exploits newly collected data, the first wave of the so-called SAVE panel, specifically collected to understand economic, psychological and sociological determinants of saving.

Overall, we find extraordinarily stable savings patterns. More than 40% of German households save regularly a fixed amount. About 25% of German households plan their savings and have a clearly defined savings target in mind. Most of German household saving is in the form of contractual saving, such as saving plans, whole life insurance and building society contracts. This makes the flow of saving rather unresponsive to economic fluctuations, such as income shocks. Most households prefer to cut consumption if ends do not meet. In particular the elderly do not like to use credit cards, and they eschew debt. We suspect large cohort differences and will study them once further waves of the SAVE panel will become available.

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# 1. Introduction

This paper takes a fresh look on the saving behavior of German households. It exploits newly collected data, the first wave of the so-called SAVE panel. It is a preliminary look since many aspects of saving can only be understood using longitudinal data – savings, after all, is an intertemporal decision. Further waves of the SAVE study will be collected in 2003 and 2005. This paper reports on the initial wave that was collected in 2001.

While the topic of savings is by no means uncharted territory – see the recent comprehensive surveys by Deaton (1992), Browning and Lusardi (1996), and Attanasio (1999) – the savings behavior of households is still not well understood. This is astonishing since the allocation of available income into spending and saving is one of the most important economic decisions made by a household. The intertemporal aspect of saving is fundamental for our understanding of how a household plans for the long term. How far ahead and how accurately do households look into the future? To what extent do they plan at all? Which rules and mechanisms do households employ when they decide about saving? These are the core questions which we try to answer in this paper.

Saving behavior encompasses not only the sober economic thinking by perfectly informed planners but also (often only seemingly) unstructured reactions deeply rooted in human psychology and socio-cultural norms. Actual behavior may deviate (e.g. Thaler and Shefrin, 1981; Laibson, 1997; O'Donoghue and Rabin, 1999) from the models which economists are used to work with (e.g. Kotlikoff, 1989; Hurd, 1990; Jappelli and Modigliani, 1998). To understand saving, it therefore helps to be open for economic as well as psychological and sociological explanations. The SAVE panel attempts so collect a large set of variables shedding light on many household characteristics. Moreover, saving behavior, whether soberly planned or driven by intuition and conventions, is shaped by the institutional and political environment, notably the social safety net, tax rules and capital market regulations (see Poterba, 1994 and Börsch-Supan, 2003). To understand saving, it therefore helps to exploit institutional variation. This paper on German saving behavior should therefore be seen in connection with – as well as in contrast to – the large literature on saving behavior of US households.

Our poor understanding of saving behavior has far-reaching consequences for economic policy. We do not understand well, for instance, to what extent saving must be encouraged so that enough savings are available for financing the investment that forms the basis for long-term growth of our economy. Payments towards a saving scheme increase the after-tax interest rate and thus the return on the funds saved. If the substitution effect prevails, measures designed to encourage saving will achieve what they are meant to do. However, there is also an income effect. If households have a specific target in mind – say an automobile, a foreign trip, a house or a certain sum for their old age – then a higher return only means that the state is now helping and they themselves have to save less to achieve the same goal. In this case, savings subsidies are only a windfall; they do not increase savings within the economy as a whole and may even reduce aggregate savings, if the taxes necessary to finance the subsidies are raised with inefficiencies.

A particular case in point is retirement saving and its role in pension reform. In fact, we do not have a reliable empirical basis on which to assess whether the recent German pension reform named after the then labor secretary Walter Riester will be successful in creating new saving. Similar to other multipillar pension reforms, Riester reduced the generosity of pay-as-you-go pensions and hoped that households will fill the so-created pension gap by saving in individual accounts, which are heavily subsidized. There are unresolved several issues here. First, the substitution between pay-as-you-go “virtual” saving and the “real” saving in these new accounts: will such saving exactly compensate for the reductions in pay-as-you-go pensions? Or will substitution be less than perfect? Second, will the new retirement saving simply displace other saving? Will the increase in savings made in life insurances and pension funds coincide with a reduction of saving e.g. in homeownership and real estate? We do not have good answers to these questions, and one purpose of the SAVE panel is to shed light on them during an important transition period when the new multipillar pension system in Germany will slowly replace the monolithic pay-as-you-go pension system in which 85% of retirement income was the state-provided pension.

Germany is an interesting country to study household saving behavior since it appears to contradict the familiar textbook version of the life-cycle theory of consumption and saving. Figure 1 shows the saving rate of Germans according to their age and income. It is based on data

from the income and expenditure survey conducted by the Federal Statistical Office, which collects data from a very large number of households (approx. 50,000). The saving rate is calculated as net expenditure on wealth formation (expenditure for real estate and financial assets, including capital repayment but minus borrowings), divided by the net income of the household.<sup>1</sup> An income and expenditure survey is carried out every five years. Figure 1 relates to 1993, the last year for which detailed information that can be compared with the previous year is available.<sup>2</sup>

**Figure 1: Saving rates according to income quartile and mean value, 1993 income and expenditure survey**



Source: Börsch-Supan, Reil-Held, Rodepeter, Schnabel and Winter (1999) based on income and expenditure surveys 1978–1993.

Figure 1 shows the average saving rate which is constructed from flow data: sum of purchases of assets within a year, minus sales of assets during this year, divided by net household income in the year under review. Figure 1 also shows the saving rate of three income levels, i.e. the median income and the lower and upper quartile.

<sup>1</sup> Cf. Börsch-Supan, Reil-Held, Rodepeter, Schnabel and Winter (1999)

Two aspects do not match the pattern predicted by naïve textbook theory. Firstly, we do not see borrowings from young households – they are clearly constraint. This may not be particularly surprising. More striking is that nearly everyone - whether in the middle income bracket or richer - also saves substantial amounts in old age. Only in households that earn less than 25% of average income spend more between the ages of 60 and 75 than they save.

An important purpose of the SAVE panel is therefore to shed light on the many facets of saving behavior that can enrich the life-cycle hypothesis to make it fit the actual behavior better. Extensions in four directions appear particularly promising:

- Pay more attention to the complex institutional background, in particular the social insurance system;
- Study the approximation properties when households use rules of thumb in place of perfect economic optimization, and understand ;
- Try to measure the influence of psychological factors such as risk aversion and self-control;
- Understand how households learn about saving decisions from their family and social environment.

Along these lines, this paper highlights first and large descriptive results of the first wave of the SAVE Study. Section 2 describes this new survey. Section 3 reports on methodological aspects such as representativity and item-non-response patterns. Sections 4 to 6 present the substantive results: Section 4 qualitative and quantitative saving measures, Section 5 saving motives, and Section 6 saving rules. Section 7 concludes with some preliminary suggestions relevant to public policy.

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<sup>2</sup> An analysis of the 1998 income and expenditure survey (EVS) has not been made because comparison is difficult. See page 25.

## 2. The SAVE survey

In Germany there is currently no survey which records detailed savings data in conjunction with sociological and psychological characteristics. The socio-economic panel (SOEP) only records rough indicators such as "Did you spend all of your income last year or was there anything left over?" and "Do you have a savings book?", etc., but it does not cover the quantitative composition and any change in the amount of wealth. The position was similar for the "Debit and credit" surveys which contain binary data (yes/no) on portfolio composition detailing a large set of investment forms but it did not quantify the portfolio shares.

The German Income and Expenditure Survey (EVS) conducted every five years by the Federal Statistical Office with its detailed information on the amount and composition of income, expenditure and wealth is the main source of data on the savings behavior of households in Germany.<sup>10</sup> The 1993 EVS also contains the most important socio-demographic characteristics for all persons living in the household while other surveys only contain information on the reference person. In the light of the squeeze on public funds, the 1998 EVS survey has again been slimmed down drastically and in some areas it bears very little resemblance to earlier surveys. It still covers a very large number of households but several variables that are important for savings behavior are now missing. Sociological and psychological as well as many economic characteristics important for an understanding of savings are absent because these expensive surveys are primarily intended for the administrative work of the Federal Statistical Office and not for research purposes.

Weaknesses of existing data material can only be rectified by new surveys. We departed from the Dutch CentER Panel and the US Health and Retirement Survey as examples and cooperated with the Mannheim Center for Surveys, Methods and Analyses (ZUMA) and Infratest-Burke (Munich) to produce a questionnaire consisting of six parts. The questionnaire has been designed in such a way that the interview should not exceed 45 minutes. On average, households took between 31 and 32 minutes. Table 1 provides an overview of the SAVE questionnaire.

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<sup>10</sup> Papers using these data include Börsch-Supan (1992, 1994a and b), Reil-Held (1999) and Schnabel (1999).

**Table 1: Structure of the questionnaire of the SAVE Study**

Part 1:	Introduction, determining which person will be surveyed in the respective household
Part 2:	Basic socio-economical data of the household
Part 3:	Qualitative questions concerning saving behavior, income and wealth
Part 4:	Budget balance: Quantitative questions concerning income and wealth
Part 5:	Psychological and social determinants of saving behavior
Part 6:	Conclusion: Interview-situation

The brief first part explains the purpose of the questionnaire and describes the precautions that have been taken in respect of data protection. We feel that this introduction is important because the survey deals with sensitive issues such as personal finances. The interviewer then asks to speak to a member of the household who knows about income and assets. If this person is not at home, the interviewer must make a return visit, at least five times.

Part 2 lasts about 15 minutes and is the standard initial interview in which questions are asked about the composition and socio-economic structure of the household, including age, education and participation in the labor force of the person surveyed and his or her partner.

Part 3 contains qualitative questions on saving behavior, such as the importance of a series of savings motives, whether there is actually anything left over to save, how regularly savings are made, etc. Questions are also asked about decision processes and possible rules of thumb, past patterns of behavior as well as their parents and attitude to money.

Part 4 is the critical part of the questionnaire because this is where a complete balance sheet of the household is ascertained. A detailed survey is made of income according to source, changes in income, the level of assets according to the various kinds of wealth, and changes in the types of wealth over the last year. Apart from financial assets, the questions also cover private and company pensions, ownership of property and business assets. Questions are also asked about debt. Part 4 is kept separate from the other parts. We will come back to this feature.

Part 5 contains questions about psychological and social factors. It includes the social environment, expectations about the economic situation, health and possible future events, life expectancy and general attitudes to life.

Part 6 ends the interview with standard questions about the interview situation and leaves both the person surveyed and the interviewer considerable scope for their own comments. We received comments about confidentiality, the length and accuracy of the questionnaire. Questions are also asked about internet access and the willingness to participate in future waves of the survey as required under German law.

A survey of this kind is an experiment in Germany. Apart from the income and expenditure survey, no German survey to date has attempted to produce such a detailed assessment of income, savings and wealth. When one combines this economic information with the questions about psychological and social factors, the survey provides a multi-faceted picture of the household surveyed. We think that only such a detailed picture will help us understanding the savings behavior of a household. The price of this complex picture is a questionnaire, which demands considerable patience and willingness to answer the questions on the part of the household.

The survey was carried out in five different variants, see Table 2 below. The variants in this initial wave were designed in order to find the best possible combination of accurate answers and willingness to answer. Later waves will use only one variant. The first four variants were computer aided personal interviews (CAPI) carried out by Infratest-Burke, Munich on a representative quota-sample. The quotas were in proportion to current official population statistics (the 2000 micro-census) and related to age, whether the respondent is a wage earner or a salaried employee, and household size. The sample augmentation in the 2003 and 2005 waves will be random-route samples. In contrast, the fifth survey method was a conventional paper and pencil questionnaire (PAPI) given to a so-called Access Panel operated by the Test Panel Institute (TPI, Wetzlar). Both surveys recorded information from households where the head of the household is between 18 and 69 years old.

The only difference among the first four variants lies in Part 4 of the questionnaire. In variants 1 and 2 of this part, all questions are answered in the presence of the interviewer. The difference between variants 1 and 2 is that the quantitative questions were presented once in numerical form

as DM amounts ("How high do you estimate your household income is in DM?") and once as categories in specified ranges disguised in such a way that it would be difficult for the interview to interpret them: "Does your income fall within range R?", in which case the respondent is given a picture in which range R, say around DM 2000 - 2,500, has been defined.

Because many of these questions relate to intensely personal matters of income and wealth, we went one step further in variants 3 and 4. Here the entire part 4 was skipped in CAPI and left with the respondent (termed "drop off", abbreviated below as CAPI-D), so that the respondents could fill it out at their leisure and without their answers being seen by the interviewer. With variant 3, the interviewer came back personally and collected that part of the questionnaire; with variant 4, the questionnaire had to be returned by mail. If this was not done within a specified number of days, the respondent was reminded of this by telephone several times.

Table 2 summarizes these five survey variants. In total, 1,829 households were surveyed. The survey took place in early summer 2001. The fieldwork for the personal interviews took place between May 29 and June 26, 2001, whereas the fieldwork for the Access Panel (cf. below) took place between June 29 and July 24, 2001.

**Table 2: Survey variants: sampling and interview techniques**

	<b>CAPI (numeric)</b>	<b>CAPI (categorical)</b>	<b>CAPI-D (via pick-up service)</b>	<b>CAPI-D (via mail)</b>	<b>Access Panel</b>
<b>Interview- technique</b>	CAPI	CAPI	CAPI	CAPI	PAPI
<b>Type of the random sample</b>	Quota sample	Quota sample	Quota sample	Quota sample	Access- Panel
<b>Questions concerning income and fortune</b>	in DM	brackets	in DM	in DM	in DM
<b>Design of part 4</b>	Part of CAPI	Part of CAPI	Drop-off (via pick-up)	Drop-off (via mail)	Part of PAPI
<b>Number of interviews</b>	295	304	294	276	660

### 3. Quality of the SAVE data

This section discusses the quality and representativity of the SAVE data, in particular item non-response. To what extent do those surveyed refuse to answer the sensitive questions? Can we keep within the agreed interview time or do the respondents lose interest in the survey after the assessment of income and wealth in part 4? How representative are the 1,829 successful interviews? In the areas also covered by official statistics, do they reflect the results in these surveys? And naturally: which variant of the survey proved to be the most successful for larger scale studies of this kind?

#### 3.1 Response rate and representative nature of the survey

The response rate for the part 4 surveys, which was left with respondents in the CAPI survey variant with the drop-off, was surprisingly high. In the version where the interviewer collected this part of the survey personally only 2% of those surveyed refused to return the completed part 4. However, even when this part had to be returned by mail, nearly 91% of respondents did as requested.

Willingness to participate in a repeat survey on the same subject was also high for German circumstances. This figure was between 59% and 66% for the CAPI variants and 90% for the Access Panel. It is therefore entirely feasible to establish a panel, in particular, because second-stage panel mortality is typically very low. Finally, it can be seen from the comments in the box provided for "Comments on the interview" that the vast majority of those surveyed found the subject matter of the interview interesting and the questions to be acceptable, in spite of the fact that they were often of a personal nature.

Table 3 shows how representative the SAVE sample is in comparison with the 2000 micro-census. The figures in this table compare the proportion of households in an age and income class with the comparable proportion of the same type of households in the micro-census. A figure of 1.2 means that the micro-census covers 20% more households of this type than are present in our random sample. If we take the micro-census as the benchmark, a figure of less than 1 indicates underrepresented household types and figures over 1 indicate overrepresented household types.

In comparison to the micro-census, our random sample contains considerably more middle-aged households but fewer older households. This applies to both sample groups (CAPI variants and Access Panel). Young households are represented approximately correctly. With regard to income, we can see a really pronounced shift towards richer households. This is particularly pronounced in the Access Panel: here the micro-census indicates four times as many households with a monthly net income of less than DM 2,500 (approx. 1,300 Euros) than in our sample group but only half as many households with an income of over DM 5,000 (approx. 2,600 Euros).

**Table 3: Representativity of the SAVE quota sample**

	Low income (up to 2500 DM)		Average income (2500 – 5000 DM)		High income (over 5000 DM)		All income categories	
	CAPI Variants	Access Panel	CAPI Variants	Access Panel	CAPI Variants	Access Panel	CAPI Variants	Access Panel
<b>Age up to 35 years</b>	1,24 (77)	3,43 (17)	0,78 (120)	0,74 (77)	2,63 (52)	2,61 (32)	<b>0,88 (249)</b>	<b>1,06 (126)</b>
<b>Age of 35 up to 55 years</b>	1,14 (67)	3,33 (14)	0,76 (226)	0,71 (148)	0,69 (198)	0,44 (190)	<b>0,79 (491)</b>	<b>0,67 (352)</b>
<b>55 years and older</b>	3,28 (58)	6,45 (18)	1,09 (182)	1,36 (89)	0,86 (94)	0,70 (70)	<b>1,41 (334)</b>	<b>1,62 (177)</b>
<b>All age categories</b>	<b>1,79 (202)</b>	<b>4,51 (49)</b>	<b>0,88 (528)</b>	<b>0,90 (314)</b>	<b>0,72 (344)</b>	<b>0,52 (292)</b>		

*Note:* Relative frequency in the micro-census 2000 divided by relative frequency in the SAVE random sample. Number of observations are shown in brackets. Currency during the survey was the DM. 2500 (5000) DM equal 1280 (2550) Euros. One Euro is roughly about 1\$ in terms of purchasing power parity.

In order to compensate for this "distortion", we are weighting all the results of the tables and graphics in sections 5 to 10 using the figures in Table 3.

### 3.2 Refusal to answer individual sections

One of our main concern was that the persons surveyed would refuse to answer precisely those questions that were the most important for understanding savings behavior since these were, at

the same time, also the questions that were the most difficult and/or most personal for the respondents.

Systematic refusal to answer was not a problem in respect of household income. In all variants of the survey, we initially tried to ask about income in Deutschmarks. Approximately 14.4% of those surveyed did not want to answer this. These respondents were then shown size classifications in which 63.3% of those surveyed indicated an income range. Consequently, information on income was available for 94.7% of households. When it came to providing information on wealth, the number of those refusing to answer was considerably higher. In fact, the refusal rates for individual questions ("item non-response") vary greatly between individual items and between survey variants - a very important outcome of this experimental survey in terms of the methodology. Details are shown in the appendix, they can be summarized as follows:

- As a rule, the rate at which households refused to respond was between a quarter and a third. These levels reflect the situation in surveys in Great Britain and the United States. This clearly refutes the frequently held view that, in contrast to the Anglo-Saxon countries, you cannot ask about financial matters in Germany.
- An important exception was the CAPI variant in which the respondents had to disclose to the interviewer their wealth in Deutschmarks. Here the refusal to answer was very high. This confirms the obvious: anonymity is extremely important.
- A second exception was the question about a private insurance. This concept was clearly not understood by the majority of households.

### 3.3 Quality of answers

Ultimately, it is important to understand the quality of the answers in respect of the range of fluctuations, outliers and the extent to which they concur with related sets of data. This, too, is covered in detail in the appendix. Compared to official statistics, the age of the respondents is lower than the age of the head of household recorded there. There are two reasons for this bias (in spite of weighting, see Table 3). Firstly, in many cases the persons responding to our survey are the wives of the heads of household recorded in the 2000 micro-census and the 1998 income and

consumption survey and, in a typical German marriage, wives are approximately three years younger than their husbands. Secondly, our random sample does not cover households in which the heads of household are substantially older than 69.<sup>11</sup>

With regard to the size of the household, it is noticeable that the Access Panel contains considerably more households made up of a husband and wife with children than do the four CAPI variants. However, overall the household size of the SAVE random sample agrees exactly with the size of household in the 2000 micro-census.

A good match has also been achieved for the household's net income vis-à-vis the familiar sets of data that are often used. In all types of the survey, respondents were initially asked to give their household income as a figure. If they refused, respondents then chose categories for their answers, which would then be anonymous for the interviewer. There was, therefore, no difference between the survey variants in recording income.<sup>12</sup>

Table 4 shows that the mean value of the net income recorded in the SAVE study is in very close agreement with the net household income recorded in the 2000 micro-census. It is only slightly higher than the figure in the Socio-Economic Panel (SOEP) and lower the figure in the Income and Expenditure Survey (EVS).

**Table 4: Comparison of mean household net income**

	<b>SAVE 2001</b>	<b>MZ 2000</b>	<b>SOEP 1999</b>	<b>EVS 1998</b>
<b>Mean</b>	2020	1995	1896	2247
<b>Median</b>	1841	./.	1636	1900
<b>Standard error</b>	28,8	./.	16,0	6,9

*Note:* The SAVE value is the mean of all variants of the SAVE Study. The MZ 2000 value is the average across grouped numbers. All numbers are in Euro. EVS 1998 figures based on own calculations.

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<sup>11</sup> According to the terms of reference in respect of the quota, the survey should only cover respondents aged between 18 and 69 (cf. section 3). In actual fact, there are a few respondents in the random sample who are younger and a few who are older.

<sup>12</sup> In 21 cases the monthly income was confused with the annual income and the coding was corrected accordingly.

A comparison of financial assets is more difficult because only very little official statistical data is available. We define financial wealth as the value of all financial investments (total of deposits in savings accounts, amounts saved under a building society savings agreement, the market value of whole life insurance policies and private pension schemes, bonds, equities, mutual funds, investment funds and real-estate investment trusts). This includes all individual items ascertained in part 4 of the questionnaire.<sup>13</sup>

In contrast to net household income, the questions relating to wealth were asked differently in the individual variants of the survey, as described in Table 2. We are therefore interested in whether outcomes differ according to variant, see Table 5.

**Table 5: Comparison of the mean total wealth in euros**

	<b>CAPI (numer.)</b>	<b>CAPI (categ.)</b>	<b>CAPI-D (pick-up)</b>	<b>CAPI-D (mail)</b>	<b>Access Panel</b>	<b>SAVE</b>	<b>EVS 1998</b>
<b>Mean</b>	73.823	102.521	100.756	105.473	143.828	112.773	113.639
<b>Median</b>	7.792	19.940	18.867	36.813	51.129	26.178	38.685
<b>Std. error</b>	12.052	15.489	18.419	13.118	14.619	7.180	810
<b>Amount</b>	119	202	176	168	328	993	49.720

*Note:* All values of the SAVE-Study weighted according to table 3. The SAVE value is the mean across all variants of the SAVE Study. EVS values based on own calculations. All values are in euros.

In view of the high standard error - wealth fluctuates widely between the households - the mean figures for wealth are statistically identical in the majority of CAPI survey variants. However, in the survey variant that was not anonymous (first column: "CAPI numerical") overall wealth was considerably lower. Here the answer is often a series of zeros, which tends to indicate that the respondents wished to conceal the fact that they were refusing to answer rather than the fact that they do not have available the specific details on their assets. The households that make up the Access Panel are considerably wealthier - or it may be that we manage to make a better record of

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<sup>13</sup> Two individual items had to be recoded as "missing" because it was clear that they were implausible.

their wealth than we do in the other households. In other respects, the mean values are considerably higher than the medians, due to the well-known asymmetry of the wealth distribution.

How does the data on wealth compare with the figures given in the official statistics? This can be seen in the last two columns of Table 5. Overall both the mean value and the median of wealth in the SAVE Study are lower than the figures recorded in the 1998 EVS. The difference is, however, only barely statistically significant and concurs with the higher income of EVS households.

Finally, we compared the saving rate in the SAVE study with the EVS saving rate, see Table 6. The saving rate is defined as the sum of savings which were the subject of direct questions ("Can you tell me how much money you and your partner saved in total in the year 2000?") divided by the net income. New borrowings are deducted from this figure; repayments are added to the savings. These savings do not contain real savings, in other words expenditure on durable consumer goods, housing etc. In view of the considerable influence outliers have on saving rates, we use more robust medians and avoid means.

**Table 6: Comparison of saving rates (in %)**

	<b>CAPI (numer.)</b>	<b>CAPI (categ.)</b>	<b>CAPI-D (pick-up)</b>	<b>CAPI-D (mail)</b>	<b>Access Panel</b>	<b>SAVE</b>	<b>EVS 1998</b>
<b>Median</b>	11,7%	11,4%	10,7%	9,6%	14,2%	12,0%	10,9%
<b>Std.error</b>	1,2%	0,9%	1,1%	1,4%	1,2%	0,6%	0,0%
<b>Amount</b>	126	153	114	126	349	868	45375

*Note:* All values of the SAVE Study weighted according to table 3. EVS values based on own calculations.

The median saving rate in our SAVE study (i.e. calculated across all survey variants) was 12%. As would be expected in view of the higher wealth of the Access Panel - as compared with the other respondents - the saving rate of the Access Panel is also higher. In other respects, the difference in the saving rates in the CAPI variants of the SAVE Study is not statistically significant. The saving rate of SAVE respondents was 1.1 percentage points higher than the

saving rate in the sample group of the EVS income and consumption survey (10.9%). However, this difference is not statistically significant.

The SAVE and EVS saving rates are, however, substantially higher than the saving rate calculated by the German Bundesbank and cited in official statistics which was 9.8% in 1999. The reason for this is that the Bundesbank "saving rate of private households" also includes private non-profit organizations (such as trade unions and churches) whereas households in the SAVE study and the EVS are only private households in the strict sense of the word.

### 3.4 Lessons for further waves

Germans are prepared to give information about their wealth and how they save, not much different from US households. However, measures must be put in place during both the interview and subsequent analysis to provide a credible assurance that the respondents' anonymity will be preserved.

The information from the SAVE study corresponds closely with the information which we have obtained from the official statistics (here, in particular, the 2000 micro-census and the 1998 income and consumption survey) and the socio-economic panel. This applies to demographic indicators such as age and size of household as well as for the most important economic values of this study - in other words income, wealth and saving rate.

Which variant of the survey proved to be the best? If we take as our benchmark the attitude as regards refusing to answer and the representative nature of the information, the CAPI (Computer Aided Personal Interview) in combination with one part handled on a drop-off basis appeared to be the best method. While the Access Panel delivered excellent results in respect of willingness to answer and accuracy, this panel appears to be substantially self-selected towards larger and richer households.

## 4. Qualitative and quantitative saving measures

While the primary purpose of the initial wave was methodological, we also evaluated the answers of the respondents in order to understand which substantive results can be expected from a panel

survey. We first turn to the qualitative saving questions. In general, the households gave a rather positive assessment of their situation in life: most households surveyed have adequate income available to save ("saving capability") and they appear to have a sufficiently positive view of the future to also want to save ("willingness to save"). In brief: the majority of Germans save and the Germans who save put away substantial amounts.

#### 4.1 Qualitative information on savings

We begin with the "warm-up question" on how the households surveyed manage to balance income and expenditure in general. Table 7 shows the questions and the different responses for those households in the upper and lower income brackets. Approximately half of those surveyed had "some money left at the end of the month", whereas the number of households who "always had a lot of money left" or "only had some money left if additional one-off revenues came in" were about the same.

**Table 7: Saving capability**

<i>"If you think back, how well did you get along with your revenues in the year 2000? Which of the following best describes your experience?"</i>			
	All households	Income <i>below</i> median	Income <i>above</i> median
At the end of the month, there was always a lot of money left	14,6%	7,0%	22,1%
At the end of the month, there was often some money left	49,4%	45,7%	53,1%
There was only some money left if additional one-off revenues came in	14,8%	16,7%	12,9%
Often, there was not enough money left at the end of the month	17,1%	24,3%	9,9%
At the end of the month, there was never enough money left.	4,3%	6,4%	2,1%

*Note:* Weighted averages across survey variants, see Table 3.

Nearly two-thirds of German households and over three quarters of households in the richer half of the income bracket are "capable of saving". However, approximately one in five households state that the money was "often" or "never" enough - and surprisingly this also includes 12% of households whose income puts them in the richer bracket of German households.

## 4.2 Quantitative information on saving

These qualitative answers can be translated into hard figures. We first ascertain a rather broad and vague number of the total amount saved ("Can you tell me how much money you and your partner saved in total in the year 2000?"). Borrowings are then deducted from this; debt repayments are added to savings. The median saving rate of 12.0% is approximately the same as the figure we know from the German Income and Expenditure Survey - as we have already established in Table 6. Table 8, which shows the saving rate as a function of the saving capability listed in Table 7, shows that the answers are intuitively plausible. The households with savings capability save at a rate that is nearly three times as high as those households where funds are always short.

**Table 8: Saving rate and saving capability**

	At the end of the month, there was always a lot of money left	At the end of the month, there was often some money left	There was only some money left if additional one-off revenues came in	Often, there was not enough money left at the end of the month	At the end of the month, there was never enough money left	<b>All</b>
<b>Mean</b>	22,8%	13,8%	11,9%	10,4%	7,4%	14,8%
<b>Median</b>	20,2%	11,6%	9,4%	8,7%	7,8%	12,0%
<b>Std. error</b>	1,3%	0,8%	1,2%	1,6%	2,9%	0,6%

Note: Weighted averages across survey variants, see Table 3.

It is interesting that, even in households who say that "there was never enough money left at the end of the month", the saving rate was over 7%. This is an interesting finding. One explanation is

that contractual saving – such as building society contributions, parts of the premium to whole life insurance contracts, debt repayment which are typically paid by automatic withdrawal from checking accounts in Germany – is not counted in this one-item question. We see evidence for this explanation in the course of the paper.

Table 9 presents Euro amounts of saving and its components. In 2000 the households in our SAVE sample saved nearly Euro 4,850 in an colloquial sense of the word (gross savings, i.e. purchase of new savings investments minus the sale of old savings investments) and on average paid off around Euro 180 more of debts than they took out in new borrowings. Net new debt is therefore negative and savings in an economic sense (i.e. the net savings) is greater than gross saving. However, many households do not have any outstanding debt, hence the low mean value and a median of zero. Among the approx. 900 households for which current data on borrowings and savings formation were available, the net savings were around Euro 5,350 in 2000. This corresponds to a saving rate of 14.8%.

**Table 9: Gross and net savings**

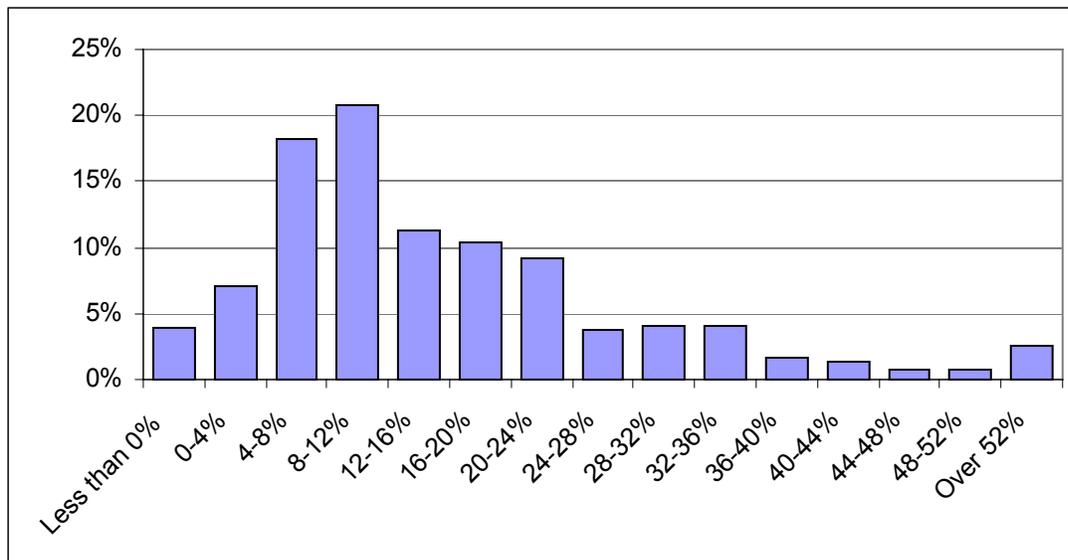
	Gross savings	Net new debt	Net savings
<i>Absolute values for 2000 (Euro)</i>			
Mean	4842,1	-179,8	5338,6
Median	2556	0	3068
Standard error	401,1	335,2	643,4
Number of households	1039	1534	905
<i>Saving rates (Percentages)</i>			
Mean	13,2%	-1,9%	14,8%
Median	10,2%	0%	12,0%
Standard error	0,3%	1,3%	0,6%
Number of households	1001	1486	868

*Note:* Weighted averages across survey variants, see Table 3. Saving rates are monthly savings divided by monthly net income. Medians are not additive.

The medians are substantially below the mean values which indicates that the distribution is skewed: many households save very little but some households save a great deal. Even so, half of households put by Euro 3,070 net in 2000, in other words more than 12% of net income.

Figure 2 provides more detailed information about the distribution of the saving rate. The majority of households save between 8 and 12% of their net household income. Only around 4% state that they liquidate more savings than they invest in other savings instruments. The proportion of high saving rates is extraordinary. Around 11% of households maintain that they save a third or more of their net income. Out of the nearly 3% of particularly high saving rates (over 50% of net income) at the right-hand extremity of the distribution chart, some are however likely to be implausible, although it is quite possible that a considerable amount is saved in the case of lump-sum receipts (such as an inheritance). We will look at this again later on.

**Figure 2: Distribution of net savings**



*Note:* Weighted averages across survey variants, see Table 3. The saving rates are monthly savings divided by net income per month.

### 4.3 Assets

These savings accumulate to the stock of assets. We differentiate between financial and real-estate assets. Financial wealth is defined as the value of all financial investments (total of deposits in savings accounts, amounts saved under a building society savings agreement,<sup>14</sup> the

<sup>14</sup> Building society savings contracts are an important savings vehicle in Germany. See Börsch-Supan and Stahl (1991b) for a description and analysis.

market value of whole life insurance policies and private pension schemes, bonds, equities, mutual funds, investment funds and real-estate investment trusts). Real-estate assets are made up from the value of self-used real estate, the value of other property, business assets and other assets (jewelry, antiques, etc.). Total wealth is ultimately the sum of financial assets and real-estate assets minus any outstanding loans.

If individual parts of questions were not answered, total wealth could not be reconstructed without making further assumptions. In these cases, total wealth was coded as "missing". A total of 993 households provided a complete set of data on assets, i.e. 54% of all respondents.

Over 80% of households were able to give a figure for the wealth they possess (i.e. a positive amount), see Table 10. Around 46% of SAVE households state that they own property, generally a residential property they use themselves. This figure lies between the official statistics (EVS 1998: 47%) and the Socio-Economic Panel (approx. 41%). Around 44% of households have debt. For the majority of households these are mortgages or building loans on their owned home.

**Table 10: Total wealth and single asset types**

	<b>Total wealth</b>	Financial assets	Self-used real estate	Debt	<b>Business assets</b>
<b>Proportion of households that own this kind of wealth</b>	<b>82,4%</b>	83,5%	45,8%	43,6%	4,0%
Households that own this asset type:					
Number	<b>818</b>	900	793	728	71
Mean (Euro)	142.284	31.878	208.279	52.768	213.305
Median (Euro)	64.934	13.294	191.734	19.429	40.903
Std. error (Euro)	8.512	1.864	6.292	2.857	40.890

*Note:* Weighted averages across survey variants, see Table 3. Amounts in Euro. „Owning“ of an asset type means that the household lists a positive amount for this asset type. Total wealth was only calculated for those households which provided data on all asset types. Since some households listed certain asset types (i.e. financial assets), but refused to provide information about others, the proportion of households with positive total wealth lies below the proportion of households with positive financial assets.

In the case of 82% of households who held positive wealth, this figure was around Euro 143,000. Financial assets were only around Euro 32,000. In contrast, the average value of the property owned was Euro 208,000. The value of residential property correlates closely to the value of

financial assets, as Table 11 shows. Households with high financial assets also live in expensive houses, whereas households who rent their accommodation also have the least financial assets. These types of assets are therefore not substitutes but are complementary forms of investment.

**Table 11: Correlation between financial and housing wealth**

	Value of owner-occupied housing				
Financial wealth	N/A	Below 128k Euro (250k DM)	128-256k Euro (250-500k DM)	256-512k Euro (500-1000k DM)	Above 512k Euro (1 Mio DM)
<b>Mean</b>	15.900	19.303	35.485	58.963	1286.517
<b>Median</b>	3681	10.226	18.560	29.655	132.936
<b>Standard error</b>	1440	3582	3125	9210	35.828
<b>Number</b>	582	84	266	118	13

*Note:* Weighted averages across survey variants, see Table 3.

The distribution of wealth is very skewed. Many households have few assets but some households have very considerable assets. If one looks at the distribution of wealth by income group, we obtain the following picture: The poorer half of earners only own just under 20% of total wealth, whereas the 10% of households in our SAVE Study with the highest incomes own approx. 33% of total wealth.

**Table 12: Wealth and saving capability**

	At the end of the month, there was always a lot of money left	At the end of the month, there was often some money left	There was only some money left if additional one-off revenues came in	Often, there was not enough money left at the end of the month	At the end of the month, there was never enough money left
<b>Mean</b>	277.642	115.187	75.636	43.014	21.531
<b>Median</b>	155.944	53.123	11.862	1636	0
<b>Std. error</b>	37.547	6959	10.974	6982	7512

*Note:* Values weighted across survey variants, see Table 3. All amounts in euros.

As expected, there is a high correlation between qualitative saving capability and wealth, see Table 12. In the case of households in which "there was never enough money left" at the end of the month, the average total wealth was around Euro 22,000 and more than half these households stated that they did not have any assets at all, whereas households who "always had a lot of money left" had assets of Euro 280,000 on average and more than half owned more than Euro 156,000.

#### 4.4 Age structure of savings

Since this only one cross-section, we cannot distinguish age from cohort effects in saving. We thus cannot make inference on life-cycle behavior, but at least we can say something about how the elderly save or dissave in the year 2001.

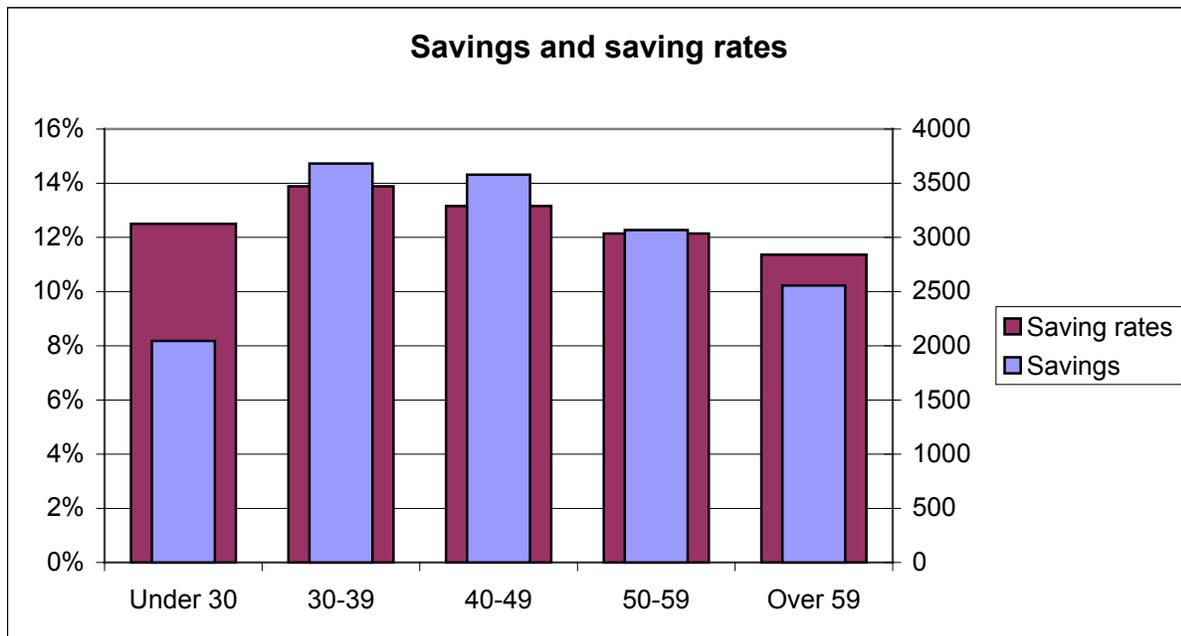
Table 13 shows us that a majority of older households in 2001 "always have a lot of money left" or "often have some money left" at the end of the month, actually considerably more often than it is the case for younger households. On average, at least, old age is currently not a time in life when German savers have a bad time. When we look at actual savings, the figures also do not provide evidence to dissaving in old age. Figure 3 shows the saving rate (thicker bars) and absolute savings (thinner bars). While older (earlier born, if one prefers the cohort interpretation) households save less than younger ones, both the saving rate and absolute saving remain positive.

**Table 13: Who is able to save? Age pattern**

Saving capability	Age		
	Under 30	30-59	60 and over
At the end of the month, there was always a lot of money left	9,7%	13,2%	14,5%
At the end of the month, there was often some money left	47,2%	45,0%	58,0%
There was only some money left if additional one-off revenues came in	14,3%	17,8%	10,8%
Often, there was not enough money left at the end of the month	23,1%	19,5%	12,9%
At the end of the month, there was never enough money left	5,8%	4,5%	3,8%

Note: Weighted averages across survey variants, see Table 3.

**Figure 3: Age pattern of savings**



Note: Values weighted according to table 3. Amounts in Euro.

## 5. Savings motives

There are many reasons for saving a portion of one's income, including short-term reasons such as saving for next summer's vacation and long-term reasons such as saving for retirement.<sup>15</sup>

Figure 4 shows the importance which the households in our survey attached to nine reasons for saving:

- Saving to buy their own home
- Saving as a precaution for unexpected events
- Saving to pay off debts
- Old-age provision
- Saving to go on vacation
- Saving to make a major purchase (car, furniture, etc.)
- Saving for education or for supporting children/grandchildren
- Saving to provide bequests for children or grandchildren
- Saving to take advantage of state subsidies (e.g. a subsidy for building society savings).

Each reason for saving had to be rated on a scale from 0 (no importance) to 10 (very important).

What is immediately noticeable are qualitative differences. Some motives have a clear maximum at 10, others at 0, and a third group is bimodal. In the case of buying a home and repaying debts, the emphasis is on the two extremes - nearly all households consider that these two reasons for saving are either of absolutely no importance or really important. The reason is obvious: "saving to buy one's own home" is an important reason for saving either already own their own home or want to become a home owner. Equally, the answer in respect of "repaying debts" is almost exclusively linked to the current debt situation of the households.

Nearly all households rated "saving as a precaution" and "saving for old age" as important. The number of households who considered saving for unforeseen events was of lesser importance

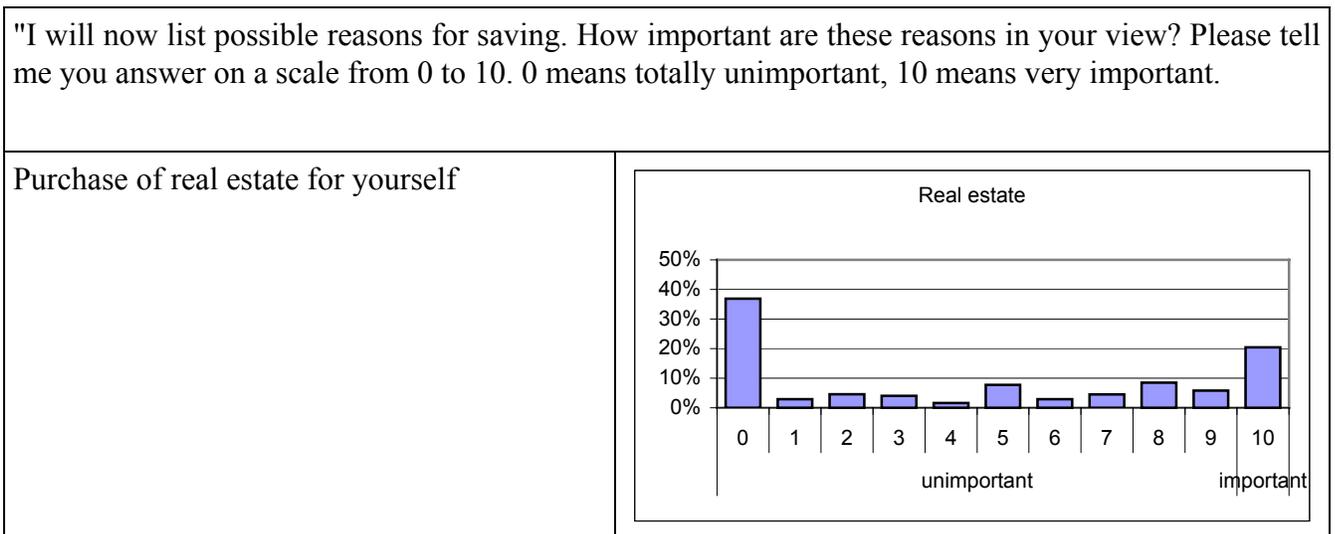
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<sup>15</sup> The literature on savings motives is extensive. This is not the place to review them. Among economists, most attention has been given to retirement savings (Modigliani and Brumberg, 1954; Feldstein, 1974), precautionary savings (Abel, 1985; Carroll, 1992; Carroll and Samwick, 1998; Lusardi, 1997), and bequest motives (Bernheim et al., 1985; Hurd, 1987).

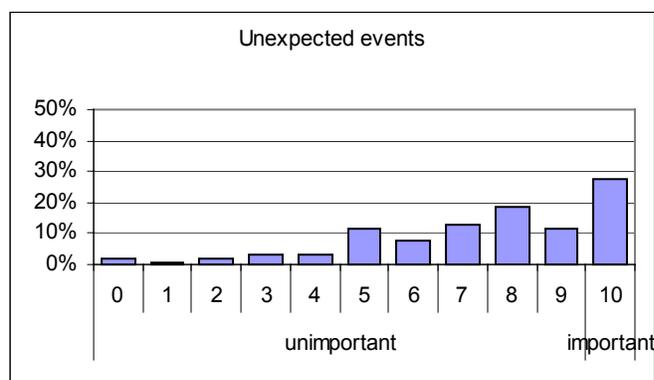
(rated between 0 and 4 on the 10-point scale) was only 4.0%, and the number of households who felt the same about savings as provision for old age was only 8.6%.

Conversely, saving for educating or supporting children or grandchildren was only accorded secondary importance, as was - surprisingly - saving to provide an inheritance to children or grandchildren. With regard to inheritance, nearly 40% of households were of the opinion that this was an absolutely unimportant reason (classification of 0). Exploiting state incentives to save also did not turn out to be a primary reason for saving. This prompts doubts concerning the effectiveness of the various savings policies, including the huge new incentives to take out a private pension and homeownership subsidies. This must be seen in the context of respondents' answers on saving for old-age provision and for acquiring their own home: it is apparent that the primary reason (adequate income in old age, owning one's own home) is considerably more important than the secondary reason (tax incentives). If tax incentives are only a secondary reason for saving, the danger of "windfalls" is high. Further evidence is needed, however, to make a sound judgement on this finding.

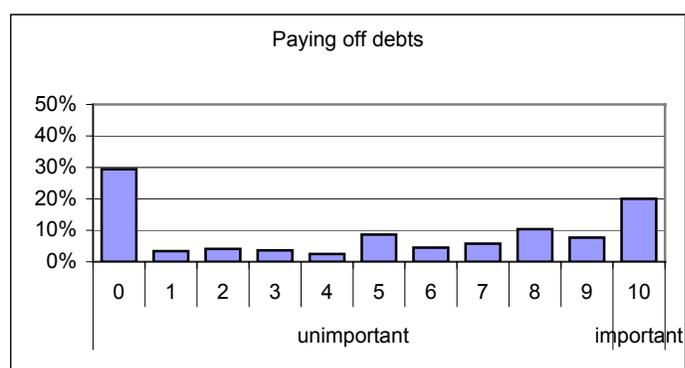
**Figure 4: Reasons for saving**



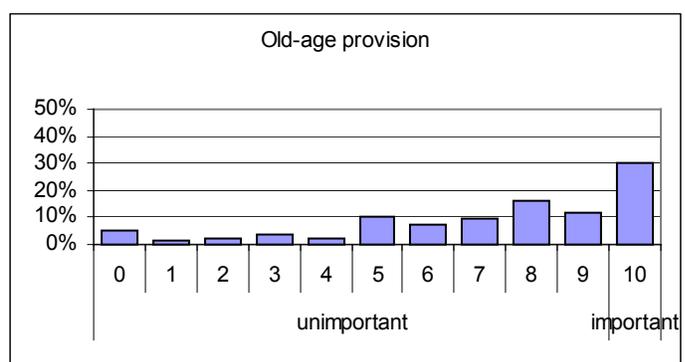
Precautions for unexpected events



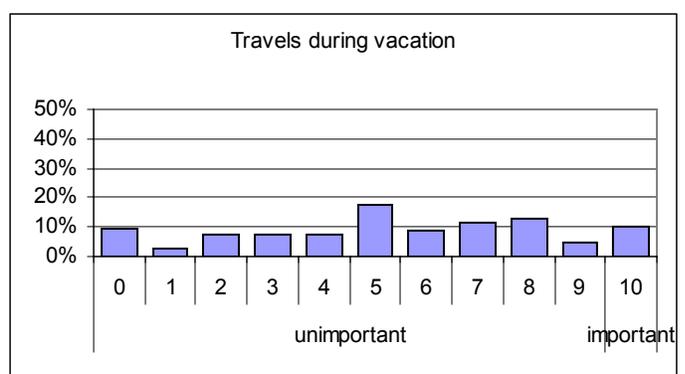
Paying off debts



Old-age provision



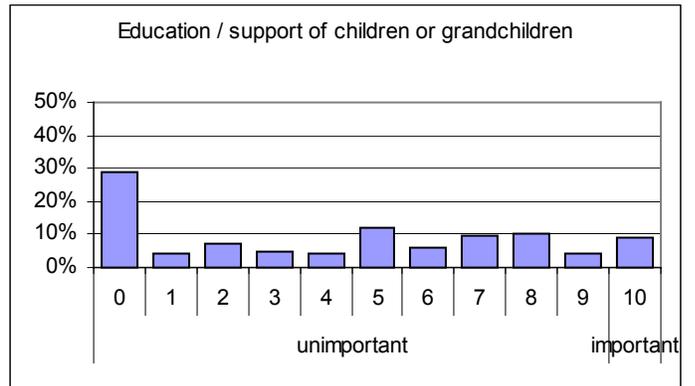
Travels during vacation



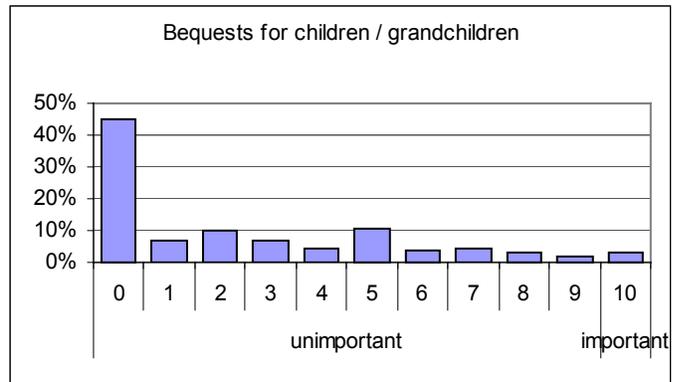
Major purchases



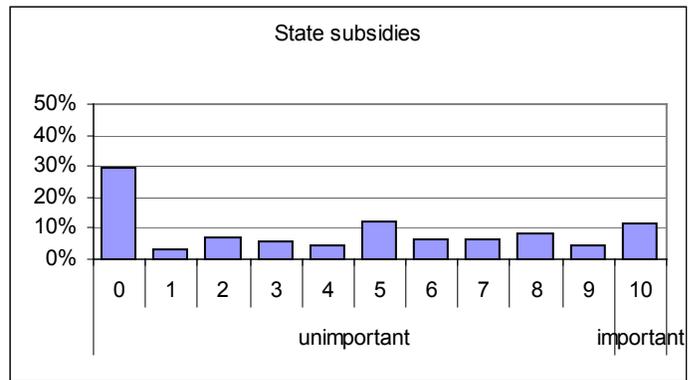
Education and support of children or grandchildren



Bequests for children or grandchildren



Taking advantage of state subsidies (for example, a subsidy to building society savings or private pension plans)



Note: Weighted averages across survey variants, see Table 3.

Figure 4 contains declarations of intent. Are these intentions also credible? A particular opportunity to verify savings intentions is offered by unexpected lump-sum payments (e.g. inheritances or gifts) because they - according to economic theory - are supposed to be mainly used for saving and less for consumption. Table 14 shows what households did who received a particularly high lump sum. The column "Number of households" shows the percentage of households who used the lump sum payment for the purpose indicated in the first column. For example, 11.2% of households paid part of their lump sum into a savings account (or a similar form of investment). As multiple answers could be given and the households often divided the lump sum for different purposes, these percentages often add up to more than 100%.

**Table 14: Use of large lump sum payments:**

<i>"In 2000, did you or your partner receive extraordinarily high revenues or inheritance of over 1,000 DM? What did you / your partner do with the money? Which of the following applies? Please only list amounts of at least DM 500."</i>						
<i>1. Dedicated saving account (building society, whole life insurance, individual pension)</i>						
<i>2. Other financial saving, for example purchase of stocks or securities</i>						
<i>3. Purchase of an apartment or a house</i>						
<i>4. Renovation or expansion of an apartment or a house</i>						
<i>5. Purchase of commodities, for example a car or furniture</i>						
<i>6. Travels during vacation 7. Articles for everyday life 8. Paying off debt 9. Other</i>						
	<b>Frequency of the investment</b>	<b>Number</b>	<b>Median of the expenditure share</b>	<b>Number</b>	<b>Average expenditure share</b>	<b>Number</b>
<b>1. Dedicated savings</b>	11,2%	57	40,0%	42	7,0 %	46
<b>2. Other financial saving</b>	24,8%	119	72,7%	103	19,3%	108
<b>3. Purchase of real estate..</b>	6,0%	25	91,3%	15	24,6%	19
<b>4. Renovation or expansion..</b>	21,9%	114	51,3%	95	11,9%	109
<b>5. Purchase of commodities..</b>	25,4%	129	42,9%	112	9,4%	122
<b>6. Travels during vacation</b>	26,6%	134	44,4%	115	3,9%	130
<b>7. Articles for everyday life</b>	34,0%	171	26,3%	132	2,5%	145

<b>8. Paying off debt</b>	21,7%	111	60,0%	95	8,8%	104
<b>9. Other</b>	8,7%	41	71,4%	33	12,6%	36

*Note:* Weighted averages across survey variants, see Table 3. "Median expenditure share" is the median of the expenditure ratio (expenditure for the respective use divided by lump sum. "Average expenditure share" is the total sum of expenditures for the respective use divided by the total sum of investments (total sums across all respondents).

The column "median of the expenditure share" describes the percentage of lump sums used for the respective purpose (we are using the more robust median rather than the mean value). The number "40%" in the first line thus means that, of those who have paid part of their lump sum into a savings account, the median share used for that purpose was 40%. This column therefore describes the intensity of a usage for those who selected that usage.

Finally, the penultimate column ("average expenditure share") shows what happened to the overall sum of all lump sum payments - these percentages therefore add up to 100%. If we come back to the example given in the first line, in total only 7% of the total amount received as lump sums found its way into savings accounts, whereas 93% was used for other purposes. This last column therefore states what is important for the economy as a whole.

While the most frequently stated use of the lump sum (34%) was for "articles for everyday life", households who stated this spent only around a quarter of the lump sum on it. From an aggregate point of view, this usage category thus only played a secondary role with 2.5% of the overall total lump sum spent on it. Other short-run expenditure is money spent on vacations -- in total, around 4%. Thus less than 10% of lump-sum income is spent on short-term consumption.

From this aggregate view, investment in real estate, shares and securities -- in other words, savings in the form of property and financial assets -- play a much more important role. What is noticeable with these investments is that those households who operate them concentrate on them to a very great extent. More than 90% of the lump sum payments is used for real estate if this type of usage is chosen. Including conventional savings investments, building society savings agreements, whole life insurance policies and private pensions, more than half of the lump-sum income is used directly for savings. On top of this, renovations and repayment of debts account for around a further 20%. Consumer durables fall in the gray area between consumption and investment and account for just under 10% of the total additional income.

Hence, although Table 14 is based on relatively few households -- so the results must be interpreted cautiously -- a rather clear overall picture emerges. It confirms that the proportion of additional revenue used for consumption is only negligible while most goes towards savings.

We now return to the initial question and ask ourselves whether the intentions in Figure 4 correspond to actual behavior. It does, at least as shown in Table 15 in which we compare the actual use of unexpected lump-sum payments (here coded as yes/no according to whether lump sum has been used for purpose x) with the corresponding savings motives (here coded in three categories: purpose x was an important/indifferent/unimportant reason to save).

**Table 15: Consistency of words and actual behavior**

Use of lump sum for:	Vacation		Paying off debt		Purchase of real estate		Durables (cars, furniture)	
	no	yes	no	yes	no	yes	no	yes
Reason for saving	Travels		Paying off debt		Purchase of own home		Larger purchases (cars, furniture)	
Not important	22,9	4,4	34,5	4,2	35,4	5,0	12,5	6,7
Indifferent	55,4	47,9	22,9	29,6	18,7	19,8	55,0	68,1
Important	21,7	47,6	42,6	66,1	45,9	75,3	32,6	25,2
Number of households	364	134	387	111	473	25	369	129

Use of lump sum for:	Dedicated savings (Whole life insurance, individual pension)				Other savings (stocks, securities)			
	no	yes	no	yes	no	yes	no	yes
Reason for saving:	Old-age provision		Unexpected events		Old-age provision		Unexpected events	
Unimportant	5,1	4,0	2,7	2,1	4,9	5,4	2,6	2,8
Indifferent	28,8	15,4	36,3	40,9	27,5	26,7	38,1	32,8
Important	66,1	80,6	61,0	57,0	67,6	67,9	59,3	64,4
Number of Households	441	57	441	57	379	119	379	119

Note: Weighted averages across survey variants, see Table 3.

Among those who listed "vacation" as an important reason for saving, more than twice as many households actually spent a lump sum payment on vacation trips (47.6% vs. 21.7%). A similar correlation exists for repayment of debts (66.1% vs. 42.6%) and for purchasing real estate (75.3% vs. 45.9%).

The preference for old-age provision is also quite clearly reflected in the type of investment selected. Over 80% of households who state that old age provision is an important reason for saving invest a portion of their lump sum payment in a whole life insurance policy or a private pension. This contrasts with a figure of 45.9% for those who "save as a precaution" (households which save for non-specific and unforeseen events). These households tend to invest the unexpected lump-sum amounts in shares and securities (64.4%). It is only when it comes to purchasing consumer durables that this picture becomes less clear. Overall, therefore, intentions are quite well backed up by actual deeds, at least among those who received an unexpected lump-sum payment.

The saving motives have a clear age and income structure, as can be seen in Table 16.

**Table 16: Saving motives by age and income**

		Age group (Year)			Income group (DM)		
		under 35	35-54	>55	under 2500	2500-<5000	>5000
<b>Saving for unexpected events</b>	unimportant	3,8%	4,6%	1,9%	6,9%	2,8%	2,8%
	indifferent	41,5%	37,4%	30,4%	41,1%	35,8%	35,9%
	important	54,7%	57,9%	67,7%	52,0%	61,5%	61,4%
<b>Saving for old-age provision</b>	unimportant	7,6%	7,1%	18,0%	11,9%	8,3%	5,5%
	indifferent	37,3%	31,7%	21,9%	32,7%	31,5%	32,6%
	important	55,1%	61,2%	60,1%	55,4%	60,1%	61,9%
<b>Purchase of own home</b>	unimportant	26,4%	48,3%	55,6%	54,2%	44,1%	31,8%
	indifferent	28,8%	18,6%	10,2%	23,9%	20,1%	16,9%
	important	44,8%	33,1%	34,3%	21,9%	35,8%	51,3%
<b>Travel and vacation</b>	unimportant	14,8%	21,1%	22,1%	26,7%	18,0%	14,4%
	indifferent	55,2%	50,5%	49,2%	47,1%	50,5%	58,6%
	important	30,0%	28,4%	28,7%	26,2%	31,5%	27,1%
<b>Larger purchases</b>	unimportant	7,5%	14,5%	26,5%	24,8%	11,0%	7,5%
	indifferent	58,0%	56,0%	48,8%	51,0%	55,3%	59,8%
	important	34,5%	29,4%	24,7%	24,3%	33,7%	32,7%

Note: Weighted averages across survey variants, see Table 3.

Older and richer households find saving for unforeseen events more important than do younger people (67.7% vs. 57.9% vs. 54.7%) and poorer people (61.4% vs. 61.5% vs. 52.0%). The differences in income may be surprising because richer households would find it easier to finance unforeseen events from their regular income. The income effect is also reflected in saving for old-age provision: Richer households place more emphasis on this than do poorer households (61.9% vs. 60.1% vs. 55.4%). Finally and as one would expect, saving for one's own home is reflected in a very distinct age and income profile: considerably more younger (44.8%) and, above all, richer (51.3%) households save for their own home. The picture is very similar with respect to major purchases (34.5% or 32.7%).

## **6. Saving rules**

In many regards, this section is the core section of this paper. It reports on our attempt to use direct and indirect questions to shed light how German households save; i.e., which rules they apply to determine the amount of savings. The section investigates saving “behavior” in a very fundamental sense (see Lettau and Uhlig, 1999).

### **6.1 Direct questions about saving behavior**

Table 17 lists the answer to the question "Which of the following sentences best describes your own personal saving behavior?" The households were asked to choose one alternative. They were only allowed to select one option so that the result would produce a clear rating.

Table 17 shows that the largest proportion of households - around 40% - save a fixed amount, and this regularly. A further fifth also save regularly but they adjust the amount they save to the circumstances. Thus, nearly 60% of all households save on a regular basis. For just under a quarter of households the decision on whether to save anything is primarily guided by available income. 16% of the households state that they do not have sufficient financial capacity to save and only very few accord themselves the freedom of just living for the day.

We have deliberately asked about the primary behavioral pattern in order to force the households to give a clear answer. However, the fact that one of the category headings in Table 18 has been selected, does not rule out that actual behavior may be more complicated and consist of several

behavioral patterns. For instance, a household may save a fixed amount on a regular basis but also save additional sums if the amount of income they receive turns out to be particularly high.

**Table 17: Self-assessment of saving behavior**

	I regularly save a fixed amount	I regularly save, but the amount is flexible	I save only if there is money left to save	I do not have the financial capability to save	I do not save. I rather enjoy life
All	40,1%	18,4%	23,1%	16,0%	2,4%
<b>By age:</b>					
Up to under 35	49,2%	13,8%	20,8%	15,3%	0,9%
35-55	38,3%	18,4%	23,8%	17,7%	1,8%
55 and older	29,7%	27,2%	25,0%	10,1%	8,1%
<b>By income:</b>					
Up to 2500 DM	18,8%	11,5%	33,5%	33,8%	2,4%
2500-5000 DM	43,7%	20,6%	21,3%	11,8%	2,8%
Over 5000 DM	58,6%	21,7%	13,9%	4,9%	1,2%

*Note:* Weighted averages across survey variants, see Table 3.

The extraordinary point about the answers in Table 17 is how many households emphasize the regular nature of their savings. Rather than just making use of short-term fluctuations in income, savings are made from long-term elements of income and then a fixed amount is frequently saved for a long period.

This regularity is extraordinary - particularly among young people: Nearly half (49.2%) of those under 35 save a fixed amount on a regular basis. Hardly any households in this age group state that they only enjoy life (0.9%), whereas an more than proportionally large number of older households do this. In spite of this, the majority of these older households (56.9%) save something - again a confirmation of the fact that older households in Germany do not dissave.

Household income plays the role one would expect. The rich are more likely to save regularly while a third of those households which have an income of under DM 2,500 state that they do not have the financial capability to save.

Part of the striking regularity of German saving behavior can be explained by a small set of firm savings objectives. This is shown in Table 18. A good quarter of the 81.6% of households who answered the above question by stating that they saved in some form (either regularly or irregularly) have a set savings objective in mind.

**Table 18: Fixed savings targets**

		<b>Saving goal (Mean) in Euro</b>	<b>Saving goal (Median) in Euro</b>	<b>Time (Mean) in years</b>	<b>Time (Median) in years</b>
All	25,5%	53.515	15.339	6,5	4
<b>By age:</b>					
Under 35	30,1%	79.516	25.565	6,5	5
35-55	24,3%	45.999	15.339	7,3	4
55 and older	21,5%	15.481	5113	2,8	5
<b>By income:</b>					
Up to 2500 DM	23,4%	15.049	5113	4,5	2
2500-5000 DM	24,6%	40.799	11.760	6,4	2
over 5000 DM	29,4%	89.862	51.129	8,3	6

*Note:* Weighted averages across survey variants, see Table 3. Only households that save according to the first three columns in Table 29 (1555 households in total).

Young people have more often than average a fixed savings goal in mind (30.1%). The amount is rather high (Euro 79,250 on average, Euro 25,564 median). We speculate that the main reason is the purchase of their own home. Among those aged 55 and over, the time scale is relatively short term. The savings goal is more likely to be an expensive holiday immediately after retirement. The income pattern is as expected: Richer households aim to save more and look further into the future than is the case for households with lower incomes.

## 6.2 Indirect questions about saving behavior

The discipline noticeable in Table 18 is also reflected in the fact that more than one in six households kept a record of household expenditure. This is almost exactly the same proportion as those respondents whose parents had a housekeeping book, at least according to the information provided by the households. It is noticeable that richer households are more likely to keep a record of expenditure than households with lower incomes, see Table 19.

**Table 19: Keeping record of the household budget by income**

<i>"Do you or your partner maintain a book of all household expenditures?"</i>					
	<b>below 2500 DM</b>	<b>2500-&lt;5000 DM</b>	<b>&gt;5000 DM</b>	<b>All</b>	<b>Parents</b>
<b>No</b>	87,9%	82,4%	79,7%	83,1%	83,0%
<b>Yes</b>	12,1%	17,6%	20,3%	16,9%	17,0%

*Note:* Weighted averages across survey variants, see Table 3.

Keeping a record of household expenditure appears to be an inheritable trait which is passed from one generation to another. The proportion of those households who kept a record of expenditure is almost five times higher among those respondents whose parents kept such a record than among those whose parents did not, see Table 20:

**Table 20: Inheritance of record keeping**

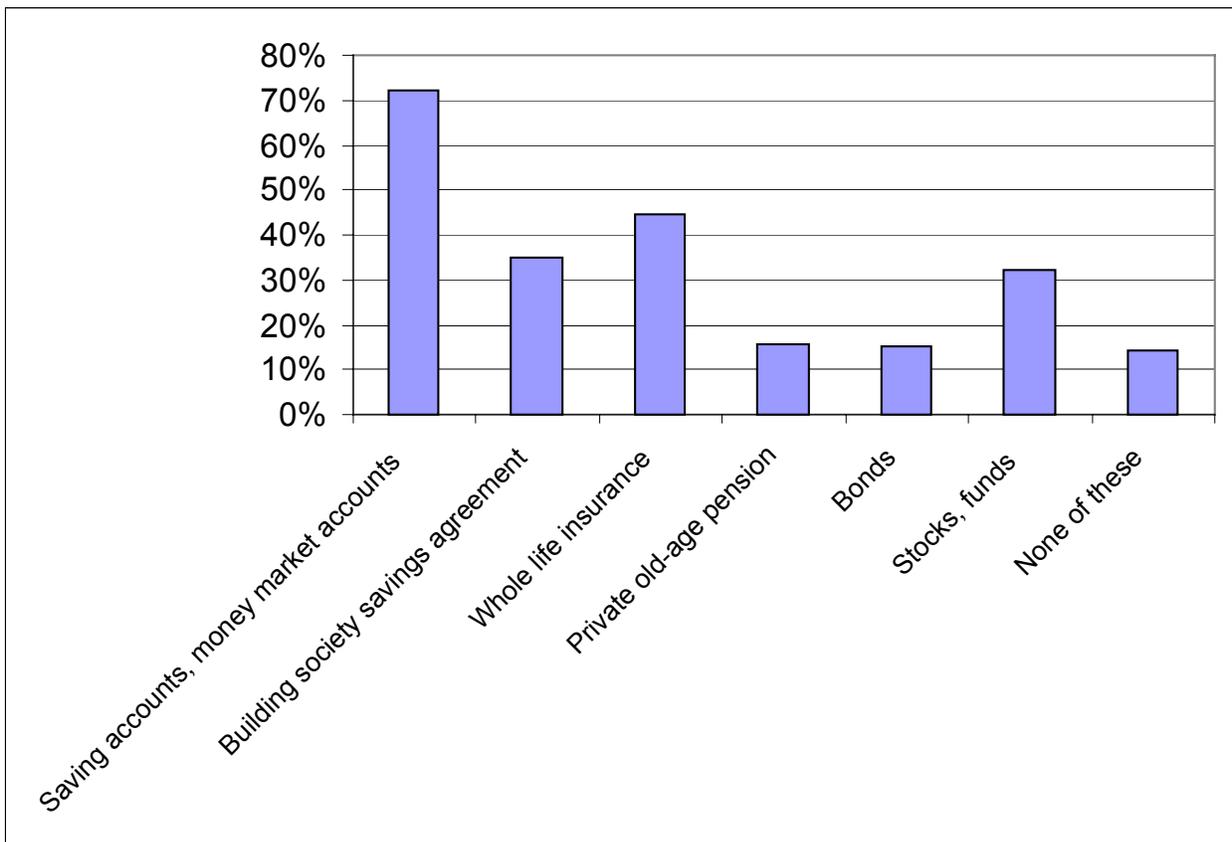
<b>Keeping records: respondents</b>	<b>Keeping records: parents</b>	
	<b>no</b>	<b>yes</b>
<b>No</b>	89,8%	53,7%
<b>Yes</b>	10,2%	46,3%

*Note:* Weighted averages across survey variants, see Table 3. The correlation-coefficient is 0.37.

### 6.3 How to invest

The way in which savings are invested in Germany is extremely conservative. Figure 5 shows that over 70% of households have conventional savings accounts and around 40% have building society savings contracts and whole life insurance policies. On the other hand, fewer than 20% of households have bonds or a private pension in their portfolio. 30% of households state that they hold shares, equities or real-estate funds.

**Figure 5: Investment of financial assets**



*Notes:* Portion of households that own a certain asset type. *Note:* Weighted averages across survey variants, see Table 3.

Portfolio choice fluctuates considerably according to age and income as can be seen in Table 21.

**Table 21: Investment of the financial assets by age and income**

	<b>Savings accounts, money market accounts</b>	<b>Building society savings agreements</b>	<b>Whole life insurance</b>	<b>Private old-age pension</b>	<b>Bonds</b>	<b>Stocks, funds</b>	<b>None of these</b>
<b>By age:</b>							
<b>under 35</b>	71,7%	48,0%	46,2%	22,0%	13,2%	41,7%	12,5%
<b>35 to 54</b>	71,0%	33,3%	47,7%	15,6%	16,3%	30,1%	14,9%
<b>over 54</b>	79,3%	15,4%	26,3%	3,0%	16,0%	19,5%	13,0%
<b>By income:</b>							
<b>&lt;2500 DM</b>	53,9%	22,7%	21,9%	12,0%	7,9%	15,1%	32,5%
<b>2500-5000 DM</b>	77,9%	35,0%	49,8%	13,4%	14,6%	26,7%	8,1%
<b>&gt;=5000 DM</b>	83,7%	49,0%	61,6%	23,1%	24,1%	54,9%	3,2%

*Notes:* Portion of households that own a certain asset type. Weighted averages across survey variants, see Table 3.

Younger households are much more likely to have building society savings contracts, whole life insurance policies, a private pension and equities. An age or life-cycle effect most probably explains the investment in building society savings and whole life insurance policies, while the higher investments in equities and funds are more likely due to a cohort effect. Persons born later have become familiar with “new” types of financial investments at an earlier age than their parents who grew up in a Germany that used passbook savings as the main instrument of savings. While Germany had a stock and bonds market fever between the two Worlds Wars, hyperinflation and World War II have changed investment behavior back to a very conservative portfolio until quite recently. Wealthier households have larger holdings of all financial investments. This effect is especially pronounced in the case of whole life insurance policies, and stocks and shares.

## 7. Conclusions

Overall, our findings show a savings pattern that is extraordinarily stable and sound. Germans save regularly, in a manner that is planned and often with a clearly defined purpose in mind. German households appear not to save in order to balance out transitory income fluctuations. Rather, they appear to save also out of income components that are stable in the long-run. It is worth noting at this point that German labor income has less individual variation than US earnings have (see Börsch-Supan and Lusardi, 2003). This should reduce the precautionary savings motive, all else equal, relative to the US. In addition, German public pension replacement rates are much higher than those of the US social security systems. This should reduce the savings motive for old-age provision relative to the US. Our findings on German savings motives, however, contradicts these predictions: We found that precaution and old-age provision are the two most important savings motives in Germany. These motives are still taken seriously. In connection with less developed credit markets (see Jappelli and Pagano, 1989), this may explain the high saving rate relative to the US in spite of “objectively” less uncertainty.

We finish this paper with a few remarks on what can we learn about economic policy. One of the greatest challenges that Germany will face in the future is demographic change. In thirty years time, for each person aged between 25 and 60 there will be over twice as many people aged over 60 than there are today. Will higher or lower amounts be saved in the wake of this demographic change? Should we be concerned about overall economic growth because of older households do not wish to save? The SAVE survey shows that the tendency to save, even in old age, is still great. Older households save nearly as enthusiastically as households in the 30 to 60 age range. If one applies today’s age-specific saving rates to the age structure of the population as it will be in the future, demographic change will have negligible effects on the aggregate household saving rate. Hence, if – and this is a big if – there is no behavioral change, saving will not be a concern. Other concerns about the effect of an aging population on overall economic growth will be more important, for instance, the burden of social security contributions or the dramatic reduction in the available workforce. Changes in behavior, however, cannot be ruled out, and they might be precipitated by the current pension reform process since more funded retirement saving is likely to induce a more pronounced hump-shaped saving profile and actual dissaving in old age.

The German pension reform of 2001 enacted by Riester will place more emphasis on private provision. To what extent must saving be encouraged to achieve this? Our results show that hardly any households save primarily because they are given subsidies to do so. The original reason - e.g. provision for old age - is, in contrast, emphasized as an important primary reason by nearly all households. In a country like Germany which anyway has a high saving rate, quite different from the US, tax incentives might therefore have considerable windfall effects, in particular for the middle class.

Finally, a time-honored crucial policy question is whether pension reform will create new savings or simply displace old savings. For instance, will the amount by which investments in life insurance policies and pension funds increase be offset by a parallel drop in assets in other types of investments, for example housing? We will need the 2003 and 2005 panel waves to answer this important question. It cannot be answered with a single cross-section because it is necessary to observe changes, i.e. potential movements of funds from one form of saving into other types of investment. The paper shows, that the first wave of the SAVE study has produced interesting data with reasonable item response rates, comparable to US surveys. It has shown that the impossibility to collect data on wealth in Germany is a myth. It is fruitful, therefore, to focus further research activities on establishing a panel of saving data in Germany.

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## **Appendix: Item non-response and data quality**

This appendix documents the extent to which those surveyed refused to answer specific questions ("item non-response").

Table A1 shows the extent to which individuals refused to answer questions about assets and borrowings. The first question asks which types of financial assets are held by the household. This is a simple yes/no question for six broad categories of financial assets. There were hardly any households who could not or would not provide any information on this topic in the presence of an interviewer and with the Access Panel. Refusal to answer was at a similarly low level among households who were asked to complete the questionnaire themselves and send it back. Of the nearly 91% who complied with the request, the willingness to provide information was very high in all areas. The same phenomenon can also be seen in the questions about home ownership (Table A2) and the situation as regards loans (Table A3).

However, there were then also a high percentage of households who did not know or were unwilling to divulge the amount in DM of one or other type of asset. Failure to provide information was noticeably high in the case of private pensions and in the case of Survey Variant 1 in which respondents were asked to give an exact figure in DM during the oral interview (CAPI numerical). Whereas the latter can be attributed to the lack of privacy, the fact that they did not know is more likely to be a reason for the high numbers who refused to answer in the case of the private pension. The reason for assuming this is that refusal to answer was high both in the second variant too, in which respondents were asked to reply in the form of coded ranges (CAPI categorical) and in the case of forms which respondents completed themselves.

Apart from the CAPI survey variant with missing numerical data and data on a private pension, the item non-response rates are within the usual range. In particular, they broadly correspond to the item non-response rates of surveys in the USA and GB. This disproves the assumption that is often made that, in contrast to the Anglo-Saxon countries, it is impossible to conduct surveys in Germany about money matters.

**Table A1: Item non-response: Financial assets**

	<b>CAPI (numer.)</b>	<b>CAPI (categ.)</b>	<b>CAPI-D (pick-up)</b>	<b>CAPI-D (mail)</b>	<b>Access Panel</b>
<b>Existence of financial assets</b>	<b>1,7%</b>	<b>0,7%</b>	<b>2,7%</b>	<b>1,2%</b>	<b>0,5%</b>
<b>Non-response rate: Value of the following components of financial assets:</b>					
<b>Savings accounts</b>	47,0%	18,1%	25,4%	18,8%	17,9%
<b>Building societies</b>	44,7%	16,9%	27,8%	30,1%	24,4%
<b>Whole life insurances</b>	57,1%	30,3%	35,1%	30,1%	37,8%
<b>Individual pensions</b>	76,8%	39,2%	54,5%	45,6%	50,4%
<b>Bonds</b>	48,7%	23,8%	46,1%	33,7%	35,1%
<b>Stocks and mutual funds</b>	53,1%	22,2%	25,0%	19,1%	20,0%

*Note:* Portion of households that gave account of which types of assets were existent (first line) and how great the assets were (other lines, in relation to asset type).

Table A2 shows the refusal rate in respect of the value of the home owned by the respondent and in which he/or she lives. Apart from the survey variant in which the respondent has to disclose the value of the house to the interviewers (CAPI numerical), the rate of refusal is very low.

**Table A2: Item non-response: Value of the owner-occupied dwelling**

	<b>CAPI (numer.)</b>	<b>CAPI (categ.)</b>	<b>CAPI-D (pick-up)</b>	<b>CAPI-D (mail)</b>	<b>Access Panel</b>
<b>No information about housing situation</b>	0,0%	0,0%	3,1%	0,0%	0,9%
<b>Value of the owner-occupied dwelling</b>	23,5%	6,2%	4,4%	5,8%	2,3%

*Note:* Portion of the households that provided valid information.

The picture for the level of debt is also similar. Item response rates are highest for the two survey variants completed entirely using CAPI technology. The figures fluctuate more because only around 41% of SAVE households have outstanding loans.

**Table A3: Item non-response: Loans and mortgages**

	<b>CAPI (numer.)</b>	<b>CAPI (categ.)</b>	<b>CAPI-D (pick-up)</b>	<b>CAPI-D (mail)</b>	<b>Access Panel</b>
<b>No information about credit history</b>	1,4%	0,3%	3,4%	1,6%	1,1%
<b>No information about types of loans</b>	0,3%	0,0%	2,1%	0,0%	0,2%
<b>Refusal rate: Amount of the following types of loans:</b>					
<b>Building society loan</b>	37,0%	19,2%	11,5%	14,7%	6,5%
<b>Mortgages</b>	18,9%	25,0%	4,3%	6,05	2,9%
<b>Consumer loans</b>	8,7%	15,6%	6,8%	4,8%	9,8%
<b>Intra-familiar loans</b>	28,6%	33,3%	27,4%	0,0%	9,7%
<b>Other</b>	11,1%	25,0%	10,1%	12,5%	7,0%

*Note:* Portion of households that provided information about whether there are loans to be paid off (first line), which kinds of loans are existent (second line), and how high the loans were (other lines, in relation to type of the loan).